CLAIMS

What is claimed is:

1.   A medical imaging system comprising:

a data acquisition system of a specific modality including at least one sensor for sensing signals of the specific modality emanating from an object being imaged wherein the modality is one of radiography, fluoroscopy, angiography, magnetic resonance imaging,

5   ultrasound, nuclear medicine, positron emission tomography and computer tomography;

an interface usable with at least first and second acquisition systems where the first and second acquisition systems are of first and second different modalities, respectively, the interface linked to one of the first and second acquisition systems, the interface comprising:

a display;

10   a programmed data processor providing a uniform interface image on the display despite the linked acquisition system modality, the uniform interface image comprising:

a function navigation space including function icons corresponding to set of data acquisition procedures which are common to each of the first and second modalities wherein, at least one of the procedures that is common to the first and second modalities includes at

15   least one procedure-specific subprocess;

a workspace adjacent the function navigation space for displaying, analyzing and manipulating images; and

a pointing device for selecting displayed icons;

wherein, when an icon is selected, the processor correlates the selected icon with a

20   corresponding data acquisition activity and performs the activity.

2.   The system of claim 1 wherein functions corresponding to each of the acquisition modalities are typically performed in an exemplary workflow pattern including a series of sequential steps and the function icons are arranged in an order of the exemplary workflow pattern.

3.   The system of claim 2 wherein the function icons are arranged in a single column.

4.   The system of claim 2 wherein the function icons include a patient information icon and an acquire icon.5.   The system of claim 4 wherein the function icons also include a view/film icon, an analyze icon and a close icon.

6.   The system of claim 1 wherein the workspace includes a workflow navigation space in which, when a function icon is selected, the processor displays a workflow icon set including a separate workflow icon corresponding to each subprocess of the process associated with the selected function icon and for the linked acquisition system modality.

7.   The system of claim 6 wherein the subprocesses of each procedure typically are performed in an exemplary workflow pattern including a series of consecutive steps and the workflow icons are arranged in an order of the exemplary workflow pattern.

8.   The system of claim 7 wherein the workflow icons are arranged in a single column.

9.   The system of claim 6 wherein each subprocess includes subprocess specific parameters, the workspace includes both an imaging window and a parameter setting space adjacent the imaging window and, when a workflow icon is selected, the processor displays a parameter value set and setting icons in the setting space which correspond to the subprocess specific parameters associated with the selected workflow icon, each parameter value indicating the current parameter value, the setting icons useable to modify the current parameter values.

10.   The system of claim 9 wherein the workflow icons include a setup icon which corresponds to the process of positioning a patient for imaging, when the setup icon is selected, the processor providing a position window in the workspace and providing an image of a properly positioned patient in the position window.

11. The system of claim 9 wherein subprocess parameters corresponding to each subprocess include a commonly modified parameter subset and a seldomly modified parameter subset and wherein, when a workflow icon is selected the processor displays parameter values and setting icons which correspond to the commonly modified parameter subset and a toolbox icon, when the toolbox icon is selected, the processor opening a toolbox window and displaying the parameter values and setting icons which correspond to the seldomly modified parameter set.

12. The system of claim 6 wherein the processor stores a workflow table which correlates subprocess sets with each modality function and wherein the processor provides a protocols icon which, when selected, causes the processor to display icons in the workspace for modifying the subprocess set to provide a modified subprocess set which is then stored by the processor as the subprocess set, the next time the corresponding function icon is selected, the processor providing a workflow icon for each of the subprocesses in the subprocess set.

13. The system of claim 6 wherein a plurality of physicians may prescribe imaging using the specific modality and each physician may have a different subprocess procedure for modality functions, the processor storing a table which correlates each physician with a physician specific subprocess set for each function, a physician identifier provided to the processor and, when a specific function icon is selected, the processor accesses the table, correlates the physician identifier with selected function subprocess set and provides a workflow icon for each subprocess in the subprocess set.

14. The system of claim 9 wherein a plurality of physicians may prescribe imaging using the specific modality and each physician may have different initial current parameter value settings for each subprocess, the processor storing a table which correlates each physician with physician specific initial current parameter value settings, a physician identifier provided to the processor and, when a specific workflow icon is selected, the processor accesses the table, correlates the physician identifier with the selected subprocess initial current parameter value settings and provides parameter icons indicating the initial current parameter value settings.

15.   A medical imaging method comprising the steps of:

providing a data acquisition system of a specific modality including at least one sensor for sensing signals of the specific modality emanating from an object being imaged wherein the modality is one of radiography, fluoroscopy, angiography, magnetic resonance imaging, 5   ultrasound, nuclear medicine, positron emission tomography and computer tomography;

providing an interface usable with at least first and second acquisition systems wherein the first and second systems are of first and second modalities, respectively, the interface including a display;

linking the interface to one of the first and second acquisition systems;

10   providing a uniform interface image on the display despite the linked acquisition system modality, the uniform interface image including a function navigation space having function icons corresponding to data acquisition procedures that are common to each of the first and second modalities wherein, at least one of the procedures that is common to the modalities including at least one procedure-specific subprocess;

15 ·   providing an icon selecting means on the display; and

when an icon is selected, correlating the selected icon with a corresponding data acquisition activity and performing the activity.

16.   The method of claim 15 wherein the step of providing a uniform interface includes providing a workspace adjacent the function navigation space for displaying, analyzing and manipulating images.

17.   The method of claim 15 wherein functions corresponding to each specific one of the medical image data acquisition modalities are typically performed in an exemplary workflow pattern including a series of sequential steps and the function icons are arranged in an order of the exemplary workflow pattern.

18.   The method of claim 17 wherein the step of providing an interface image includes the step of, as part of the workspace, providing a workflow navigation space and, when a function icon is selected, the method further includes the step of displaying a workflow icon set including a separate workflow icon corresponding to each subprocess of

5   the process associated with the selected function icon and for the specific modality in the workflow navigation space.

19.   The method of claim 18 wherein the subprocesses of each procedure typically are performed in an exemplary workflow pattern including a series of consecutive steps and the workflow icons are arranged in the workflow navigation space in an order of the exemplary workflow pattern.

20.   The method of claim 18 wherein each subprocess includes subprocess specific parameters, the step of providing an interface image includes the step of, as part of the workspace, providing both an imaging window and a parameter setting space adjacent the imaging window and, when a workflow icon is selected, the method further includes the steps

5   of, displaying a parameter value set and setting icons in the setting space which correspond to the subprocess specific parameters associated with the selected workflow icon, each parameter value indicating the current parameter value, the setting icons useable to modify the current parameter values.

21.   The method of claim 18 wherein the workflow icons include a setup icon which corresponds to the process of positioning a patient for imaging, when the setup icon is selected, the method further including the step of providing a position window in the workspace and providing an image of a properly positioned patient in the position window.

22.   The method of claim 18 wherein a plurality of physicians may prescribe imaging using the specific modality and each physician may have a different subprocess procedure for modality functions, the processor storing a table which correlates each physician with a physician specific subprocess set for each function, the method further

5   including the steps of receiving a physician identifier and, when a specific function icon is selected, accessing the table, correlating the physician identifier with the selected function subprocess set and providing a workflow icon for each subprocess in the subprocess set.

23.   A medical imaging system comprising:

a data acquisition system of a specific modality including at least one sensor for sensing signals of the specific modality emanating from an object being imaged wherein the modality is one of radiography, fluoroscopy, angiography, magnetic resonance imaging,

5   ultrasound, nuclear medicine, positron emission tomography and computer tomography;

an interface usable with at least first and second acquisition systems, the systems of first and second modalities, respectively, the interface linked to one of the first and second acquisition systems and comprising:

a display; and

10   a programmed data processor providing a uniform interface image on the display despite the linked acquisition system modality.

24.   The system of claim 23 wherein the uniform interface image comprises a function navigation space including function icons corresponding to data acquisition procedures which are common to each of the first and second modalities.

25.   The system of claim 24 wherein at least one procedure that is common to the first and second modalities includes at least one procedure-specific subprocess and, wherein, the uniform interface image further includes:

a workspace adjacent the function navigation space for displaying, analyzing and

5   manipulating images; and

a pointing device for selecting displayed icons;

wherein, when an icon is selected, the processor correlates the selected icon with a corresponding data acquisition activity and performs the activity.

26.   The system of claim 24 wherein functions corresponding to each acquisition modalities are typically performed in an exemplary workflow pattern including a series of sequential steps and the function icons are arranged in an order of the exemplary workflow pattern.

27.   The system of claim 26 wherein the function icons are arranged in a single column.

28.   The system of claim 24 wherein the workspace includes a workflow navigation space in which, when a function icon is selected, the processor displays a workflow icon set including a separate workflow icon corresponding to each subprocess of the process associated with the selected function icon and for the linked acquisition system

5   modality.

29.   The system of claim 28 wherein the subprocesses of each procedure typically are performed in an exemplary workflow pattern including a series of consecutive steps and the workflow icons are arranged in an order of the exemplary workflow pattern.

30.   A medical imaging system comprising:

at least one sensor for sensing signals of a specific modality emanating from an object being imaged wherein the modality is one of radiography, fluoroscopy, angiography, magnetic resonance imaging, ultrasound, nuclear medicine, positron emission tomography and computer tomography, at least first and second modalities including at least a set of common data acquisition procedures where at least a subset of the common procedures include procedure-specific subprocesses;

an interface usable with sensors of different modalities, the interface comprising:

a display;

a programmed data processor providing a uniform interface image on the display despite the modality of the at least one linked sensor, the uniform interface image comprising:

a function navigation space including function icons corresponding to data acquisition procedures which are common to each of the first and second modalities wherein, each procedure which is common to the modalities includes procedure-specific subprocesses;

a workspace adjacent the function navigation space for displaying, analyzing and manipulating images; and

a pointing device for selecting displayed icons;

wherein, when an icon is selected, the processor correlates the selected icon with a corresponding data acquisition activity and performs the activity.